SHARP® SERVICE MANUAL

SX207R3A64PHW

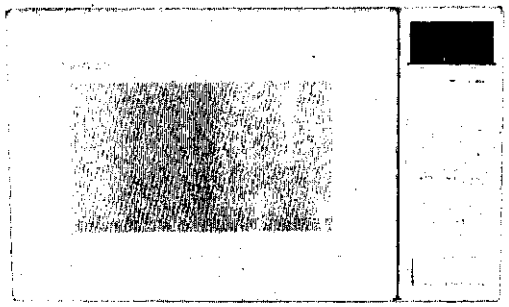


Photo R-3A64(W)

MICROWAVE OVEN

MODELS R-3A64(W) R-3A64(B)

In interests of user-safety the oven should be restored to its original condition and only parts identical to those specified should be used.

This is a supplemental Service Manual for Model R-3A64(W) etc.
Those models are quite similar to Base Model R-3E44 (Refer No. is S9205R3E54PHW).
Use this supplemental manual together with the Base Model Service Manual.
Refer to the Base Model Service Manual for complete operation, service information, etc.

TABLE OF CONTENTS

	Page
GENERAL IMPORTANT INFORMATION	1
CAUTION, MICROWAVE RADIATION,WARNING	1
PRODUCT SPECIFICATIONS	2
APPEARANCE VIEW	3
TEST PROCEDURE	4
TOUCH CONTROL ASSEMBLY	4
WIRING DIAGRAM	9
CONTROL PANEL CIRCUIT	10
PRINTED WIRING DIAGRAM	11
PARTS LIST	12
PACKING AND ACCESSORIES	18

SHARP CORPORATION

SERVICE MANUAL

SHARP

MICROWAVE OVEN

R-3A64(W)/ R-3A64(B)

GENERAL IMPORTANT INFORMATION

This Manual has been prepared to provide Sharp Corp. Service engineers with Operation and Service Information.

It is recommended that service engineers carefully study the entire text of this manual and base model manual, so they will be qualified to render satisfactory customer service.

CAUTION
MICROWAVE RADIATION

Service engineers should not be exposed to the microwave energy which may radiate from the magnetron or other microwave generating devices if it is improperly used or connected. All input and output microwave connections, waveguides, flanges and gaskets must be secured. Never operate the device without a microwave energy absorbing load attached. Never look into an open waveguide or antenna while the device is energized.

WARNING

Never operate the oven until the following points are ensured.
(A) The door is tightly closed.
(B) The door brackets and hinges are not defective.
(C) The door packing is not damaged.
(D) The door is not deformed or warped.
(E) There is not any other visible damage with the oven.

Servicing and repair work must be carried out only by trained service engineers.

All the parts marked "*" on parts list are used at voltages more than 250V.

PRODUCT SPECIFICATIONS
GENERAL INFORMATION
APPEARANCE VIEW
TOUCH CONTROL PANEL
WIRING DIAGRAM
PARTS LIST

SHARP CORPORATION
OSAKA, JAPAN

PRODUCT SPECIFICATIONS

SPECIFICATION

ITEM	DESCRIPTION
Power Requirements	220–230 Volts 50 Hertz Single phase, 3 wire grounded
Power Consumption	1.45 kW Approx. 6.2A
Power Output	900W watts nominal of RF microwave energy (measured by way of IEC 705)
Case Dimensions	Width 450mm Height 285mm including foot Depth 340mm
Cooking Cavity Dimensions	Width 285 mm Height 177 mm Depth 313 mm
Turntable diameter	272mm
Control Complement Control Complement	Touch Control System Clock(1:00– 12:59 or 0:00– 23:59) Timer (0 - 99 minutes 90 seconds) 99 minutes 90 seconds Microwave Power for Variable Cooking Repetition Rate; HIGH ..... Full power throughout the cooking time MEDIUM HIGH ..... approx. 70% of Full Power MEDIUM ..... approx. 50% of Full Power MEDIUM LOW ..... approx. 30% of Full Power LOW ..... approx. 10% of Full Power CLOCK SETTIG pad, EASY DEFROST pad POWER SETTING pad, Weight entry pads STOP pad, INSTANT ACTION pads MINUTE TIMER/HOLD pad, AUTO COOK pad Time pads, MORE (▲)/LESS (▼) pads MINUTE PLUS/START pad
Set Weight	Approx. 16.0 kg

GENERAL INFORMATION

WARNING

THIS APPLIANCE MUST BE EARTHED

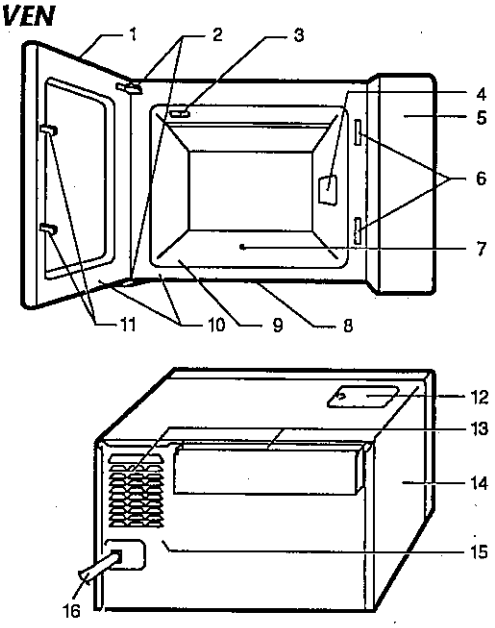
IMPORTANT

THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE:

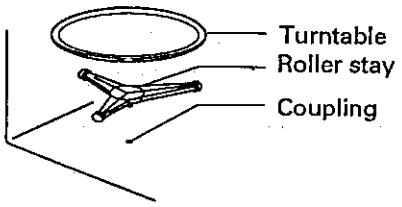
GREEN-AND-YELLOW	: EARTH
BLUE	: NEUTRAL
BROWN	: LIVE

APPEARANCE VIEW

OVEN

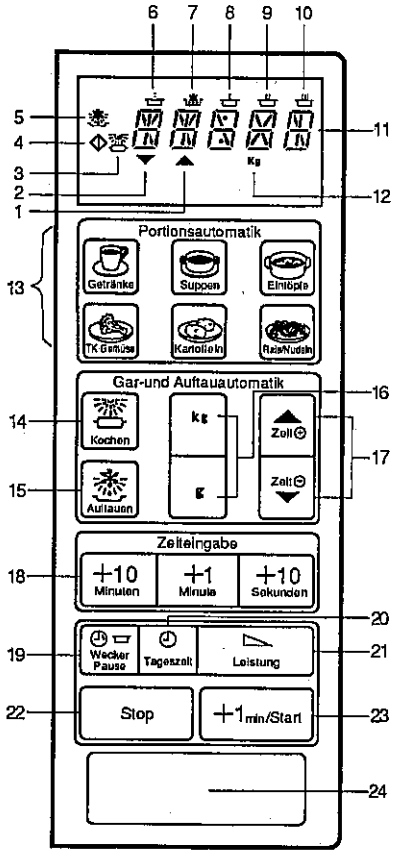


1. Door
2. Door hinges
3. Oven lamp
4. Waveguide cover
5. Control panel
6. Door lock openings
7. Coupling
8. Ventilation openings
9. Oven cavity
10. Door seals and sealing surfaces
11. Safety door latches
12. Oven lamp access cover
13. Ventilation openings
14. Outer cabinets
15. Rear cabinets
16. Power supply cord



1. Place the roller stay on the coupling.
2. Then place the turntable on it.

AUTO-TOUCH CONTROL PANEL



DISPLAY AND INDICATORS

Check indicators after the oven starts to confirm the oven is operating as desired.

1. MORE indicator
2. LESS indicator
3. AUTO COOK indicator
4. Cook indicator
   This indicator shows cooking in progress.
5. EASY DEFROST indicator
6. LOW
7. MEDIUM LOW
8. MEDIUM
9. MEDIUM HIGH
10. HIGH

   (6–10: Microwave power level indicators)
11. Digital display
12. Units of weight indicator

OPERATING KEYS

13. INSTANT ACTION keys
14. AUTO COOK key
15. EASY DEFROST key
16. Weight entry keys
17. LESS (▼)/MORE (▲) keys
18. Time keys
19. MINUTE TIMER/HOLD key
20. CLOCK SETTING key
21. Power level setting key
22. STOP key
23. MINUTE PLUS/START key
24. Door open button (▽)

TEST PROCEDURES

PROCEDURE LETTER	COMPONENT TEST
H	**MOTOR WINDING TEST**

CARRY OUT 3D CHECKS

Disconnect the leads from the motor.
Using an ohmmeter, check the resistance between the two terminals as described in the table below.

Table: Resistance of Motor

Motors	Resistance
Fan motor	Approximately 380 ohms
Turntable motor	Approximately 12 kohms

If incorrect readings are obtained, replace the motor. (Also refer to test procedure I)

CARRY OUT 4R CHECKS

TOUCH CONTROL PANEL ASSEMBLY

OUTLINE OF TOUCH CONTROL PANEL

The touch control section consists of the following units as shown in the touch control panel circuit.

(1) Key Unit
(2) Control Unit

The principal functions of these units and the signals communicated among them are explained below.

Key Unit
The key unit is composed of a matrix, signals generated in the LSI are sent to the key unit through S0-S3 and S5.
When a key pad is touched, a signal is completed through the key unit and passed back to the LSI through K4-K7 to perform the function that was requested.

Control Unit
Control unit consists of LSI, power source circuit, synchronizing signal circuit, ACL circuit, buzzer circuit, and indicator circuit.

1) **LSI**
This LSI controls the key strobe signal, relay driving signal for oven function and indicator signal.

2) **Power Source Circuit**
This circuit generates voltage necessary in the control unit.

Symbol	Voltage	Application
VDD	-12V	LSI (IC1), ACL circuit
VREF	-6.15V	LSI (IC1)
VP	-26V	Fluorescent display tube : Grid and anode voltage
VF+	3Vac	Filament of fluorescent display tube
VF-		(VF+ to VF- voltage)

3) **Synchronizing Signal Circuit**
The power source synchronizing signal is available in order to compose a basic standard time in the clock circuit.
It accompanies a very small error because it works on commercial frequency.

4) **ACL Circuit**
A circuit to generate a signal which resets the LSI to the initial state when power is supplied.

5) **Buzzer Circuit**
The buzzer responds to signals from the LSI to emit noticing sounds (key touch sound and completion sound).

6) **Door Sensing Switch**
A switch to inform the LSI if the door is open or closed.

7) **Relay Circuit**
To drive the magnetron, fan motor, turntable motor and light the oven lamp.

8) **Indicator Circuit**
Indicator element is a Fluorescent Display.
Basically, a Fluorescent Display is a triode having a cathode, a grid and an anode. Usually, the cathode of a Fluorescent Display is directly heated and the filament serves as cathode.
The Fluorescent Display has 6-digits, 13-segments are used for displaying figures.

DESCRIPTION OF LSI

LSI(IZA461DR)

The I/O signal of the LSI(IZA461DR) is detailed in the following table.

PIN NO.	1	SIGNAL	T	I/O	OUT

Signal to sound buzzer.
A: Key touch sound (0.12 sec.).
B: Completion sound (2.4 sec.).

PIN NO.	2	SIGNAL	VDD	I/O	IN

Power source voltage: -12V
VDD voltage of power source circuit input.

PIN NO.	3	SIGNAL	VREF	I/O	IN

Reference voltage input terminal.
A reference voltage applied to the A/D converter in the LSI. The reference voltage is generally maintained at -6.15V

PIN NO.	4	SIGNAL	VP	I/O	IN

Anode (segment) of Fluorescent Display illumination voltage: -26V
Vp voltage of power source circuit input.

PIN NO.	5	SIGNAL	INT	I/O	IN

Signal synchronized with commercial source frequency(50Hz).
This is the basic timing for time processing of LSI.

PIN NO.	6	SIGNAL	CNVSS	I/O	IN

Power source voltage input terminal.
Connected to GND.

PIN NO.	7-10	SIGNAL	F0-F3	I/O	OUT

Segment data signals.
Refer to the touch control panel circuit for the relationship between signals and indicators.

Normally, one pulse is output in every synchronized signal period, and input to the anode of the fluorescent display.

PIN NO.	11	SIGNAL	S0	I/O	OUT

Segment data signal.
Signal similar to F0.

Key strobe signal.
Signal applied to touch-key section. A pulse signal is input to K4-K7 terminal while one of D-8 line keys on key matrix is touched.

PIN NO.	12	SIGNAL	S1	I/O	OUT

Segment data signal.
Signal similar to F0.

Key strobe signal.
Signal applied to touch-key section. A pulse signal is input to K4-K7 terminal while one of D-7 line keys on key matrix is touched.

PIN NO.	13	SIGNAL	S2	I/O	OUT

Segment data signal.
Signal similar to F0.

Key strobe signal.
Signal applied to touch-key section. A pulse signal is input to K4-K7 terminal while one of D-6 line keys on key matrix is touched.

PIN NO.	14	SIGNAL	S3	I/O	OUT

Segment data signal.
Signal similar to F0.

Key strobe signal.
Signal applied to touch-key section. A pulse signal is input to K4-K7 terminal while one of D-5 line keys on key matrix is touched.

PIN NO.	15	SIGNAL	S4	I/O	OUT

Segment data signal. Signal similar to F0.

PIN NO.	16	SIGNAL	S5	I/O	OUT

Segment data signal.
Signal similar to F0.

Key strobe signal.
Signal applied to touch-key section. A pulse signal is input to K4-K7 terminal while one of D-3 line keys on key matrix is touched.

PIN NO.	17-18	SIGNAL	S6-S7	I/O	OUT

Segment data signal. Signal similar to F0.

PIN NO.	19	SIGNAL	XOUT	I/O	OUT

Internal clock oscillation frequency control output.
Output to control oscillation input of XIN.

PIN NO.	20	SIGNAL	XIN	I/O	IN

Internal clock oscillation frequency input setting.
The internal clock frequency is set by inserting the ceramic filter oscillation circuit with respect to XOUT terminal.

PIN NO.	21	SIGNAL	VSS	I/O	IN

Power source voltage input terminal.
Connected to GND.

PIN NO.	22-24	SIGNAL	D11-D9	I/O	OUT

Digit selection signal.
Refer to the touch control panel circuit about the relationship between signals and digits.

Normally, one pulse is output in every synchronized signal period, and input to the grid of the fluorescent display.

PIN NO.	25-27	SIGNAL	D8-D6	I/O	OUT

Digit selection signal.
Signal similar to D11.

PIN NO.	28	SIGNAL	D5	I/O	OUT

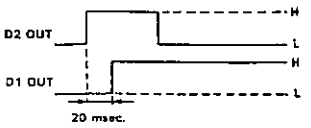
Segment data signal. Signal similar to F0.

PIN NO.	29-30	SIGNAL	D4-D3	I/O	OUT

Terminal not used.

PIN NO.	31	SIGNAL	D2	I/O	OUT

Surge limiting relay driving signal.
The surge limiting relay is designed to turn on 20 msec.earlier than the cook relay.



PIN NO.	32	SIGNAL	D1	I/O	OUT

Magnetron High-voltage circuit driving signal.
To turn on and off the cook relay.
In high operation, the signals holds "H" level during microwave cooking and "L" level while not cooking. In other cooking modes (MED. HIGH, MED., MED. LOW, LOW) the signal turns to "H" level and "L" level in repetition according to the power level.

PIN NO.	33	SIGNAL	D0	I/O	OUT

Oven lamp, turntable motor and cooling fan motor driving signal. (Square Waveform: 50Hz)
To turn on and off the control relay.
The pulse signal (50Hz) is delivered to the control relay driving circuit and cook, surge relay control circuit.

PIN NO.	34	SIGNAL	RESET	I/O	IN

Auto clear terminal.
Signal is input to reset the LSI to the initial state when power is supplied.
Temporarily set to "H" level the moment power is supplied, at this time the LSI is set.
Thereafter set at "L" level.

PIN NO.	35	SIGNAL	K7	I/O	IN

Signal coming from touch key.
When either one of D-9 line keys on key matrix is touched, a corresponding signal out of S0-S3,S5 will be input into K7. When no key is touched, the signal is held at "L" level.

PIN NO.	36	SIGNAL	K6	I/O	IN

Signal coming from touch key.
When either one of D-10 line keys on key matrix is touched, a corresponding signal will be input into K6.

PIN NO.	37	SIGNAL	K5	I/O	IN

Signal coming from touch key.
When either one of D-11 line keys on key matrix is touched, a corresponding signal will be input into K5.

PIN NO.	38	SIGNAL	K4	I/O	IN

Signal coming from touch key.
When either one of D-12 line keys on key matrix is touched, a corresponding signal will be input into K4.

PIN NO.	39	SIGNAL	K3	I/O	IN

Terminal to change functions according to the model.
By using the A/D converter contained in the LSI. DC voltage in accordance with the model in operation is applied to set up its function.

PIN NO.	40	SIGNAL	K2	I/O	IN

Input signal which communicates the door open/close information to LSI.
Door closed; "H" level signal.
Door opened; "L" level signal.

PIN NO.	41	SIGNAL	K1	I/O	IN

Terminal not used.

PIN NO.	42	SIGNAL	K0	I/O	IN

Terminal not used. Connected to GND.

SERVICING

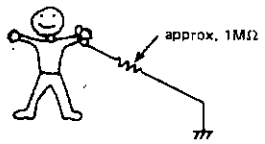
1. Precautions for Handling Electronic Components

This unit uses PMOS LSI in the integral part of the circuits. When handling these parts, the following precautions should be strictly followed.

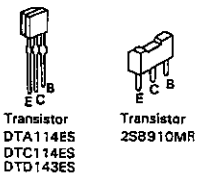
PMOS LSI have extremely high impedance at its input and output terminals. For this reason, it is easily influenced by the surrounding high voltage power source, static electricity charge in clothes, etc,and sometimes it is not fully protected by the built-in protection circuit.

In order to protect PMOS LSI.

1) When storing and transporting, thoroughly wrap them in aluminum foil.
   Also wrap all PW boards containing them in aluminium foil.
2) When soldering, ground the technician as shown in the figure and use grounded soldering iron and work table.



2. Shapes of Electronic Components



Transistor
DTA114ES
DTC114ES
DTD143ES

Transistor
2SB910MR

3. Servicing of Touch Control Panel

We describe the procedures to permit servicing of the touch control panel of the microwave oven and the precautions you must take when doing so.

To perform the servicing, power to the touch control panel is available either from the power line of the oven itself or from an external power source.

(1) Servicing the touch control panel with power supply of the oven:

CAUTION:

THE HIGH VOLTAGE TRANSFORMER OF THE MICROWAVE OVEN IS STILL LIVE DURING SERVICING PRESENT A HAZARD.

Therefore, when checking the performance of the touch control panel,put the outer cabinet on the oven to avoid touching the high voltage transformer, or unplug the primary terminal (connector) of the high voltage transformer to turn it off; the end of such connector must be insulated with an insulating tape. After servicing, be sure to replace the leads to their original locations.

A. On some models, the power supply cord between the touch control panel and the oven itself is so short that the two can't be separated. For those models, check and repair all the controls (sensor-related ones included) of the touch control panel while keeping it connected to the oven.

B. On some models, the power supply cord between the touch control panel and the oven proper is long enough that they may be separated from each other. For those models, therefore, it is possible to check and repair the controls of the touch control panel while keeping it apart from the oven proper;in this case you must short both ends of the stop switch (on PWB) of the touch control panel with a jumper, which brings about an operational state that is equivalent to the oven door being closed.
   As for the sensor-related controls of the touch control panel, checking them is possible if dummy resistor(s) with resistance equal to that of the controls are used.

(2) Servicing the touch control panel with power supply from an external power source:

Disconnect the touch control panel completely from the oven proper,and short both ends of the stop switch (on PWB) of the touch control panel,which brings about an operational state that is equivalent to the oven door being closed. Connect an external power source to the power input terminal of the touch control panel, then it is possible to check and repair the controls of the touch control panel; it is also possible to check the sensor-related controls of the touch control panel by using the dummy resistor(s).

4. Servicing Tools

Tools required to service the touch control panel assembly.

1) Soldering iron: 30W
(It is recommended to use a soldering iron with a grounding terminal.)
2) Oscilloscope: Single beam, frequency range: DC - 10MHz type or more advanced model.
3) Others: Hand tools

5. Other Precautions

1) Before turning on the power source of the control unit, remove the aluminum foil applied for preventing static electricity.
2) Connect the connector of the key unit to the control unit being sure that the lead wires are not twisted.
3) After aluminum foil is removed, be careful that abnormal voltage due to static electricity etc. is not applied to the input or output terminals.
4) Attach connectors, electrolytic capacitors, etc. to PWB, making sure that all connections are tight.
5) Be sure to use specified components where high precision is required.

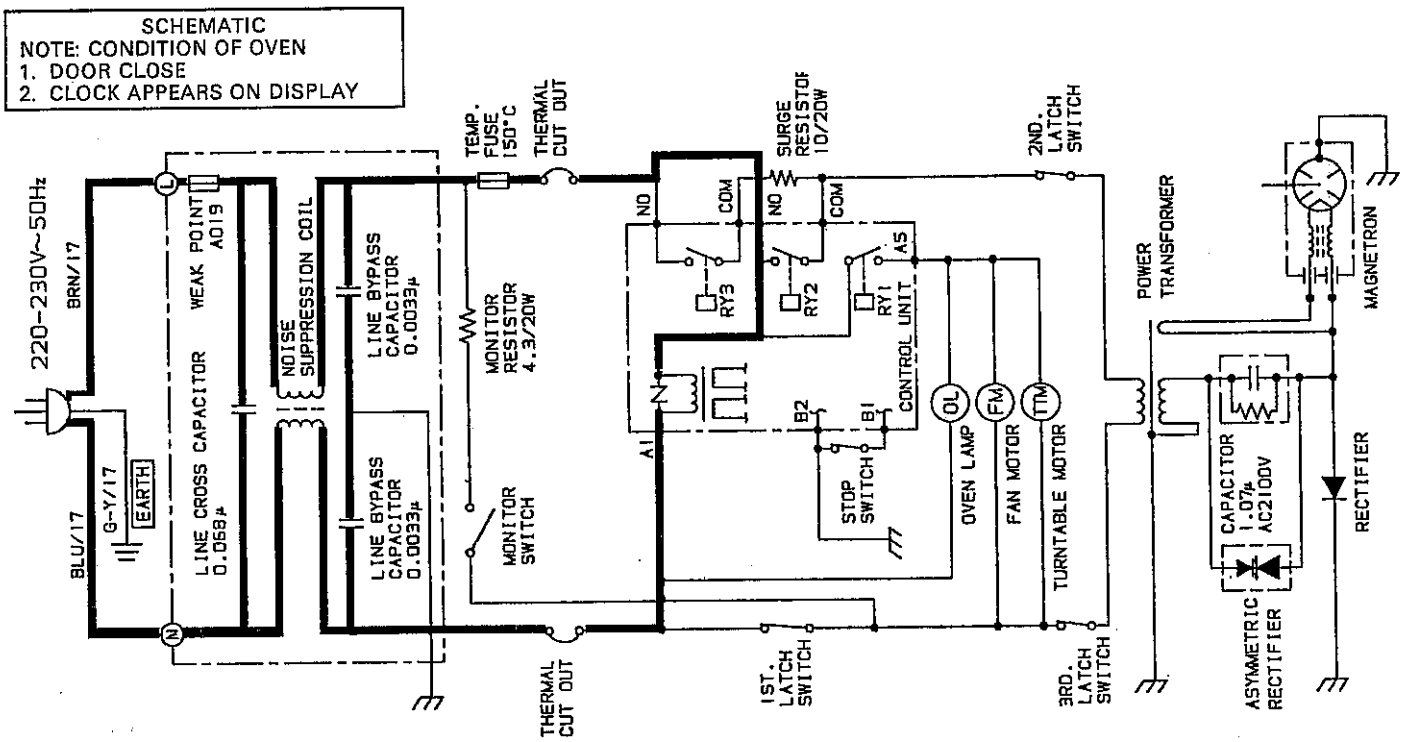


Figure O-1 Oven Schematic-OFF Condition

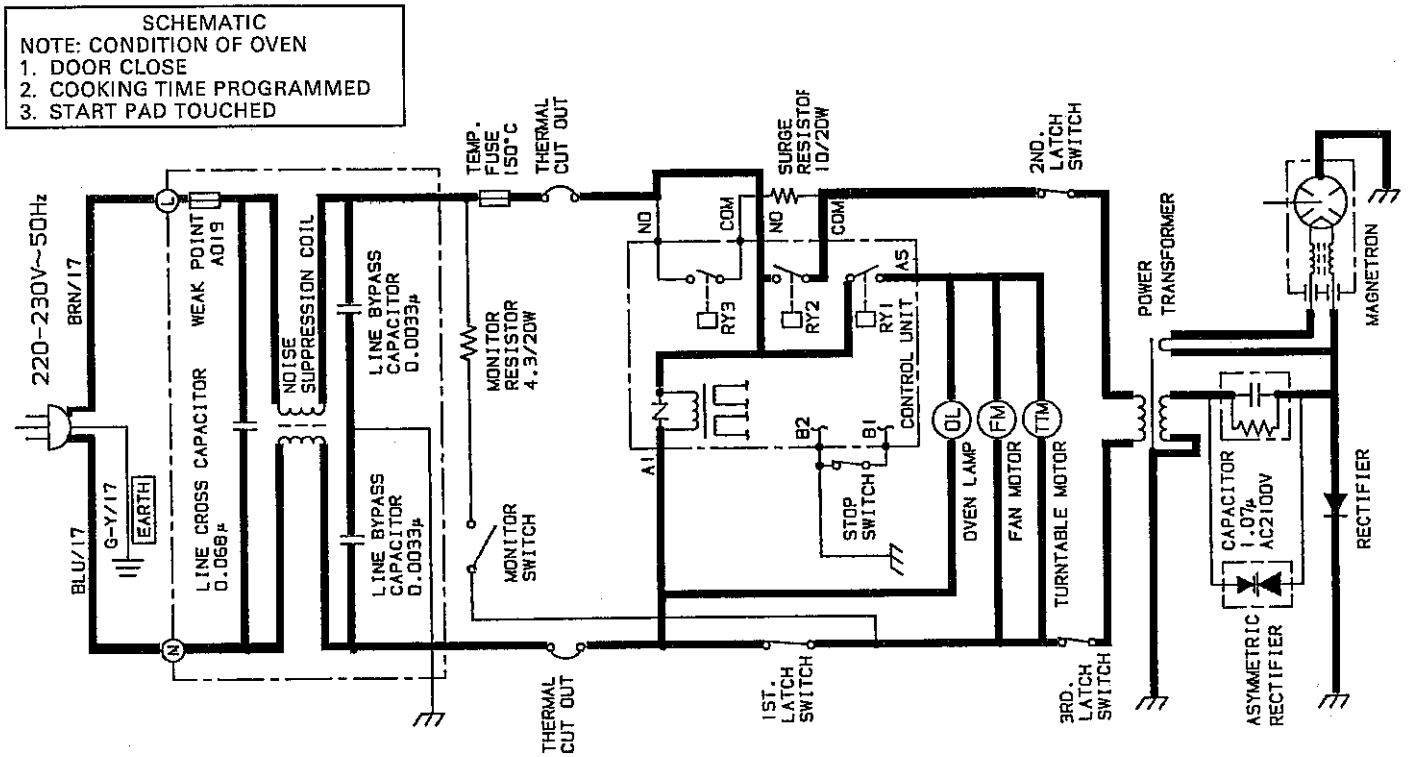


Figure O-2 Oven Schematic-ON Condition

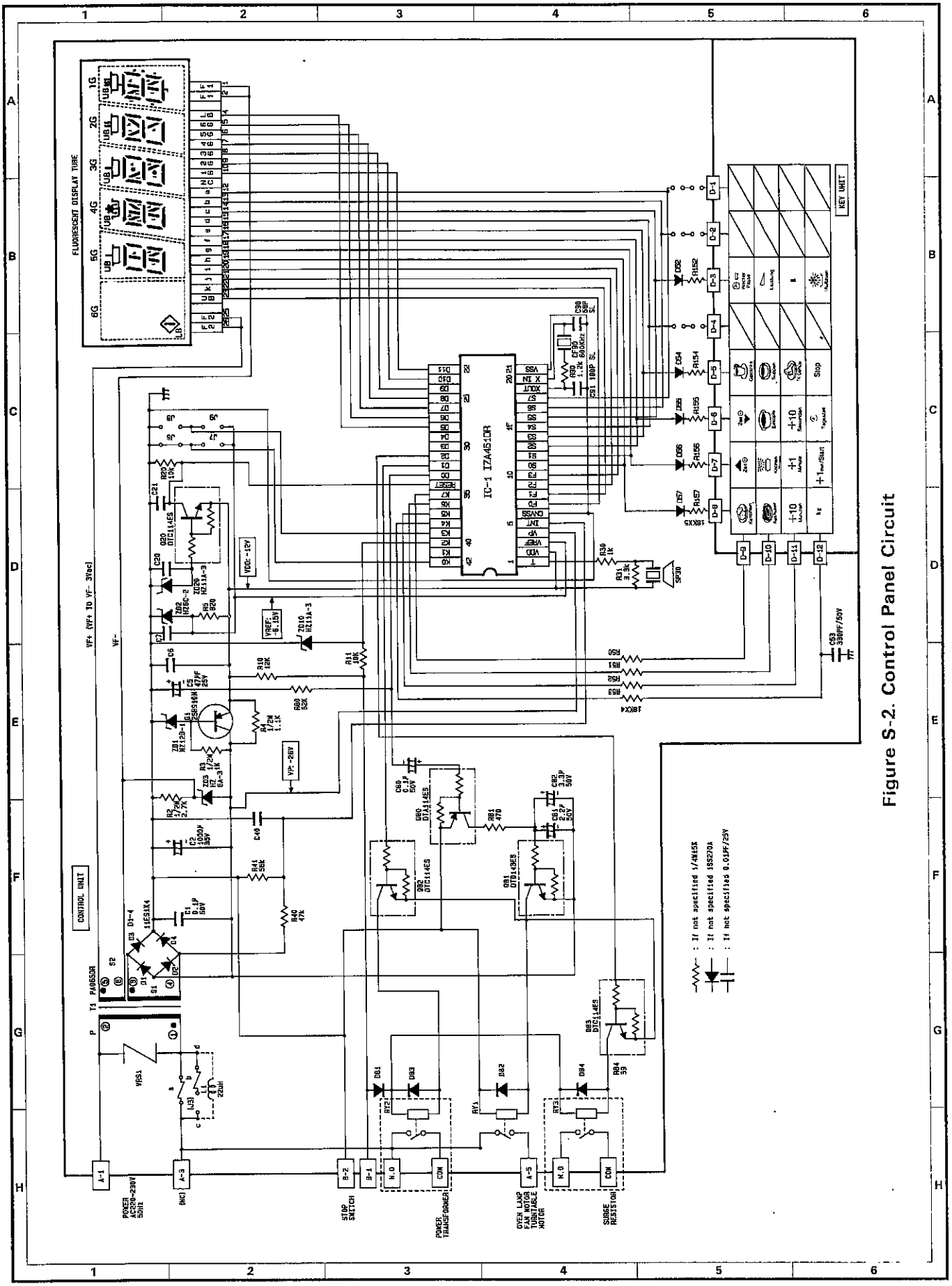


Figure S-2. Control Panel Circuit

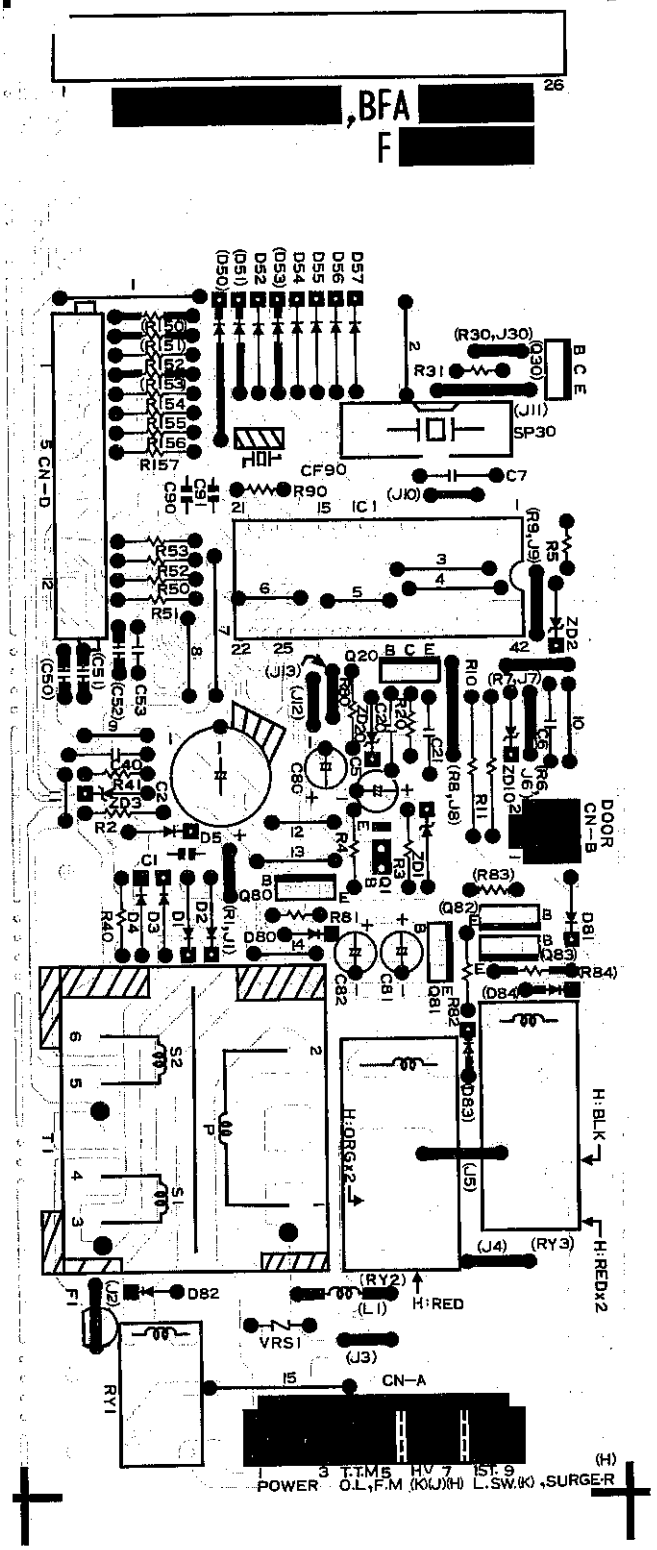


Figure S-3. Printed Wiring Board

PARTS LIST

Note : The parts marked "*" are used in voltage more than 250V.

	REF. NO.	PART NO.	DESCRIPTION	Q'TY	CODE
			ELECTRIC PARTS		
*	C	RC-QZA095WRE0	High volatage capacitor	1	AX
	F	QFS-CA019WRE0	Weak point A019	1	AE
	FM	FMOTEA265WRK0	Fan motor assembly	1	BE
*	MG	RV-MZA175WRE0	Magnetron	1	BL
	OL	RLMPTA028WRE0	Oven lamp	1	AK
	R1	RR-WZA020WRE0	Monitor resistor 4.3 ohm 20W	1	AF
	R2	RR-WZA005WRE0	Surge resistor 10 ohm 20W	1	AG
	SW1	QSW-MA110WRE0	1st latch switch	1	AM
	SW2	QSW-MA110WRE0	2nd latch switch	1	AM
	SW3	QSW-MA110WRE0	3rd latch switch	1	AM
	SW4	QSW-MA111WRE0	Monitor switch	1	AM
	SW5	QSW-MA110WRE0	Stop switch	1	AM
*	T	RTRN-A356WRE0	Power transformer	1	BQ
	TC1	RTHM-A072WRE0	Thermal cut-out 95°C	1	AX
	TC2	RTHM-A080WRE0	Thermal cut-out 145°C (Oven)	1	AP
	TF	QFS-TA013WRE0	Temp. fuse 150°C	1	AG
	TTM	RMOTDA173WRE0	Turntable motor	1	AX
*	1- 1	FH-DZA034WRK0	H.V. rectifier assembly	1	AQ
	1- 2	FPWBFA260WRK0	Noise filter	1	BA
	1- 3	QACCVA057WRE0	Power supply cord	1	AX
	1- 4	QSOCLA011WRE0	Oven lamp socket	1	AH
			CABINET PARTS		
	2- 1	FFTASA060WRK0	Oven lamp access cover, complete (B)	1	AQ
	2- 1	FFTASA061WRK0	Oven lamp access cover, complete (W)	1	AQ
	2- 1-1	PCUSGA306WRP0	Cushion	1	AA
	2- 1-2	PSLDPA005WRP0	Lamp reflector	1	AD
	2- 2	GCABUA379WRP0	Outer case cabinet (B)	1	BD
	2- 2	GCABUA380WRP0	Outer case cabinet (W)	1	BD
	2- 3	FDAI-A155WRW0	Bottom plate assembly	1	AW
	2- 4	FHNG-A096WRT0	Lower oven hinge	1	AK
	2- 5	GLEGPA023WRE0	Foot	4	AB
			CONTROL PANEL PARTS		
	3- 1	CPWBFA517WRK0	Control unit	1	BS
	3- 1A	QCNCMA234DRE0	3-pin connector (A)	1	AC
	3- 1B	QCNCMA275DRE0	2-pin connector (B)	1	AC
	3- 1C	QCNCWA030DRE0	12-pin connector (D)	1	AF
	3- 1D	RV-KXA038DRE0	Fluorescent display tube	1	AU
	C1	RC-KZA032DRE0	Capacitor 0.1μF 50V	1	AB
	C2	VCEAB31VW108M	Capacitor 1000μF 35V	1	AG
	C5	VCEAB31EW476M	Capacitor 47μF 25V	1	AB
	C6,7,20, C21,40	VCKYB11EX103N	Capacitor 0.01μF 25V	5	AA
	C53	VCKYD11HB331K	Capacitor 330pF 50V	1	AA
	C80	VCEAB31HW104M	Capacitor 0.1μF 50V	1	AC
	C81	VCEAB31HW225M	Capacitor 2.2μF 50V	1	AA
	C82	VCEAB31HW335M	Capacitor 3.3μF 50V	1	AA
	C90	VCC-F31H-680J	Capacitor 68pF 50V	1	AA
	C91	VCC-F31H-181J	Capacitor 180pF 50V	1	AB
	CF90	RCRS-2008DRE0	Ceramic resonator KBR600B(600kHz)	1	AF
	D1-4	VHD11ES1///-1	Diode (11ES1)	4	AB
	D52, D54-57, D81-84	VHD1SS270A/-1	Diode (1SS270A)	9	AA
	IC1	RH-IZA461DRE0	LSI	1	AR
	Q1	VS2SB910MR/-4	Transistor (2SB910MR)	1	AC
	Q20,82 Q83	VSDTC114ES/-3	Transistor (DTC114ES)	3	AB

Note : The parts marked "*" are used in voltage more than 250V.

REF. NO.	PART NO.	DESCRIPTION	Q'TY	CODE
Q80	VSDTA114ES/-3	Transistor (DTA114ES)	1	AB
Q81	VSDTD143ES/-3	Transistor (DTD143ES)	1	AC
R2	VRD-B12HF272J	Resistor 2.7kΩ 1/2W	1	AB
R3	VRD-B12HF102J	Resistor 1kΩ 1/2W	1	AA
R4	VRD-B12HF112J	Resistor 1.1kΩ 1/2W	1	AA
R5	VRD-B12EF821J	Resistor 820Ω 1/4W	1	AA
R10	VRD-B12EF123J	Resistor 12kΩ 1/4W	1	AA
R11,20	VRD-B12EF103J	Resistor 10kΩ 1/4W	2	AA
R30	VRD-B12EF102J	Resistor 1kΩ 1/4W	1	AA
R31	VRD-B12EF332J	Resistor 3.3kΩ 1/4W	1	AA
R40	VRD-B12EF473J	Resistor 47kΩ 1/4W	1	AA
R41	VRD-B12EF563J	Resistor 56kΩ 1/4W	1	AA
R50-53, 152, 154-157	VRD-B12EF183J	Resistor 18kΩ 1/4W	9	AA
R80	VRD-B12EF623J	Resistor 62kΩ 1/4W	1	AA
R81	VRD-B12EF471J	Resistor 470Ω 1/4W	1	AA
R90	VRD-B12EF122J	Resistor 1.2kΩ 1/4W	1	AA
RY1	RRLY-A080DRE0	Relay (OJ-SH-124LM)	1	AG
RY2,3	RRLY-A076DRE0	Relay (OMIF-S-124LM)	2	AK
SP30	RALM-A014DRE0	Buzzer (PKM22EPT-CA)	1	AG
T1	RTRNPA065DRE0	Transformer	1	AV
VRS1	RH-VZA010DRE0	Varistor (TNR15G471K)	1	AE
ZD1	VHEHZ12B1//-1	Zener diode (HZ12B1)	1	AB
ZD2	VHEHZ6C2///-1	Zener diode (HZ6C-2)	1	AA
ZD3,	VHEHZ6A3///-1	Zener diode (HZ6A-3)	1	AC
ZD10,20	VHEHZ11A3//-1	Zener diode (HZ11A-3)	2	AA
3- 2	HPNLCA968WRR0	Control panel frame (B)	1	AU
	HPNLCA967WRR0	Control panel frame (W)	1	AU
3- 3	DUNTKA543WRK0	Key unit assembly (B)	1	AZ
	DUNTKA544WRK0	Key unit assembly (W)	1	BA
3- 4	GMADIA054WRF0	Display window	1	AE
3- 5	JBTN-A690WRF0	Open button (B)	1	AH
	JBTN-A680WRF0	Open button (W)	1	AG
3- 6	MSPRDA014WRE0	Open button spring	1	AC
3- 7	XEPSD30P10XS0	Screw; 3mm x 10mm	3	AA
3- 8	PCUSUA375WRP0	Cushion	1	AA

OVEN PARTS

4- 1	LANGQA343WRP0	Fan thermo angle	1	AK
4- 2	FOVN-A267WRT0	Oven cavity	1	BN
4- 3	MLEVPA171WRF0	Switch lever	1	AF
4- 4	PHOK-A062WRF0	Latch hook	1	AP
4- 5	LANGQA340WRW0	Light mount plate	1	AM
4- 6	LBNDKA090WRW0	Capacitor holder	1	AK
4- 7	LSTPPA070WRF0	Cord anchorage (lower)	1	AC
4- 8	LANG-A037WRW0	Exhaust angle	1	AK
4- 9	PDUC-A511WRW0	Air duct	1	AS
4-10	LANG-A039WRW0	Magnetron duct	1	AL
4-11	LANG-A038WRW0	Air guide	1	AM
4-12	LANGQA167WRM0	Earth angle	1	AB
4-13	LANGTA286WRW0	Chassis support	1	AN
4-14	LSTPPA069WRF0	Cord anchorage (upper)	1	AD
4-15	PCOVPA261WRE0	Waveguide cover	1	AL
4-16	PCUSGA312WRP0	Cushion	4	AB
4-17	PCUSUA193WRP0	Cushion	1	AB
4-18	PCUSUA194WRP0	Cushion	1	AC
4-19	PCUSUA237WRP0	Waterproof cushion	2	AF
4-20	PCUSUA329WRP0	Cushion	1	AH
4-21	PCUSUA166WRP0	Cushion	1	AG
4-22	PFILWA041WRE0	Lamp filter	1	AH
4-23	PDUC-A510WRW0	Exhaust duct	1	AN
4-24	PPACGA097WRE0	O-ring	1	AG
4-25	PPACGA100WRE0	Cushion	1	AH
4-26	MHNG-A225WRT0	Upper oven hinge	1	AG
4-27	PCUSUA212WRP0	Cushion	2	AB
4-28	PZETEA062WRE0	H.V. cover	1	AH

Note : The parts marked "*" are used in voltage more than 250V.

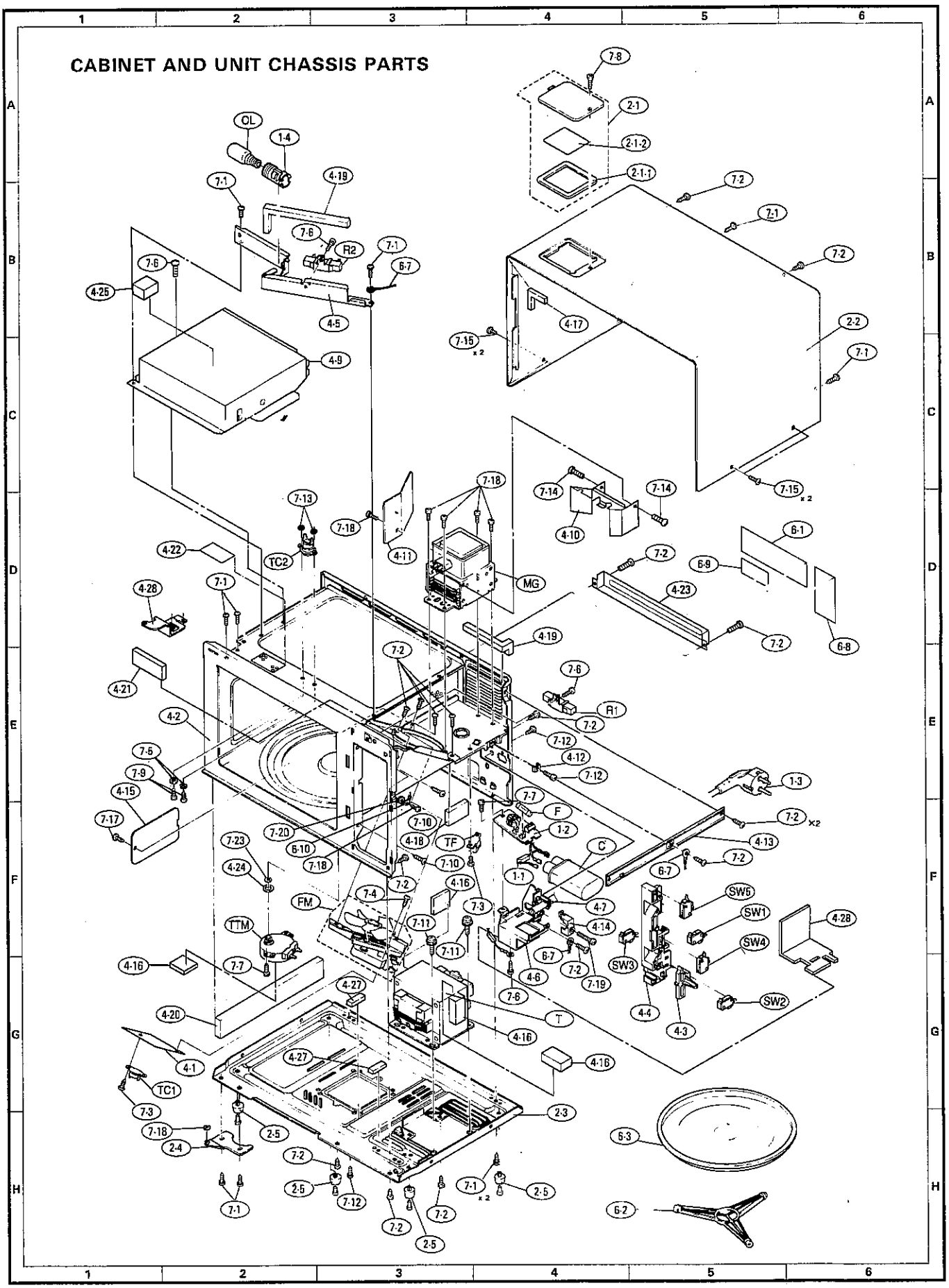
REF. NO.	PART NO.	DESCRIPTION	Q'TY	CODE
		DOOR PARTS		
5	DDORFA503WRK0	Door assembly (B)	1	BL
5	DDORFA502WRK0	Door assembly (W)	1	BL
5- 1	FDORFA203WRT0	Door panel assembly (B)	1	AW
5- 1	FDORFA199WRT0	Door panel assembly (W)	1	BD
5- 2	GCOVHA227WRF0	Choke cover (B)	1	AM
5- 2	GCOVHA229WRF0	Choke cover (W)	1	AK
5- 3	PSHEPA333WRE0	Sealer film	1	AE
5- 4	HPNL-A373WRE0	Door screen (B)	1	AZ
5- 4	HPNL-A372WRE0	Door screen (W)	1	AZ
5- 5	LSTPPA089WRF0	Latch head (B)	1	AF
5- 5	LSTPPA091WRF0	Latch head (W)	1	AG
5- 6	MSPRTA081WRE0	Latch spring	1	AA
5- 7	pshepa310WRE0	Sealer film only for (W)	1	AK
		MISCELLANEOUS		
6- 1	TSPCNB780WRR0	Rating label (B)	1	AH
6- 1	TSPCNB781WRR0	Rating label (W)	1	AH
6- 2	FROLPA065WRK0	Roller stay	1	AX
6- 3	NTNT-A034WRF0	Turntable	1	AM
6- 4	TLABMA344WRR0	Menu label	1	AK
6- 5	TINS-A345WRR0	Operation manual	1	AV
6- 6	FW-VZB178WRE0	Main wire harness	1	BA
6- 7	LBNDKA080WRE0	Wire holder B	4	AD
6- 8	TCAUHA086WRR0	Caution label	1	AF
6- 9	TCAUHA087WRR0	Belgium caution	1	AE
6-10	FW-VZA910WRE0	Switch harness	1	AH
		SCREW, NUT AND WASHER		
7- 1	XOTSD40P12RV0	Screw 4mm x 12mm	10	AA
7- 2	XOTSD40P12000	Screw 4mm x 12mm	17	AA
7- 3	XFPSD30P08000	Screw 3mm x 8mm	2	AA
7- 4	XVPSD40P20000	Screw 4mm x 20mm	1	AA
7- 5	LX-WZA032WRE0	Washer	2	AA
7- 6	XHTSD40P08RV0	Screw 4mm x 8mm	4	AA
7- 7	XFPSD40P08K00	Screw 4mm x 8mm	2	AA
7- 8	XHSSF40P08000	Screw 4mm x 8mm (B)	1	AA
7- 8	XHSSE40P08000	Screw 4mm x 8mm (W)	1	AA
7- 9	XBBUW30P06000	Screw 3mm x 6mm	2	AA
7-10	LX-CZ0052WRE0	Special screw	2	AA
7-11	LX-EZA036WRE0	Special screw	2	AA
7-12	LX-EZA045WRE0	Special screw	3	AA
7-13	LX-NZ0024YBE0	Nut	2	AA
7-14	XFPSD40P08000	Screw 4mm x 8mm	8	AA
7-15	XOTSF40P08000	Screw 4mm x 8mm (B)	4	AA
7-15	XOTSE40P08000	Screw 4mm x 8mm (W)	4	AA
7-16	LX-WZA028WRE0	Washer	1	AB
7-17	XBTUW40P08000	Screw 4mm x 8mm	1	AA
7-18	XWHNZ40-05080	Washer	1	AA
7-19	XFTSD40P30000	Screw 4mm x 30mm	1	AA
7-20	XWUSE40-05000	Washer 4mm x 0.5mm	1	AA

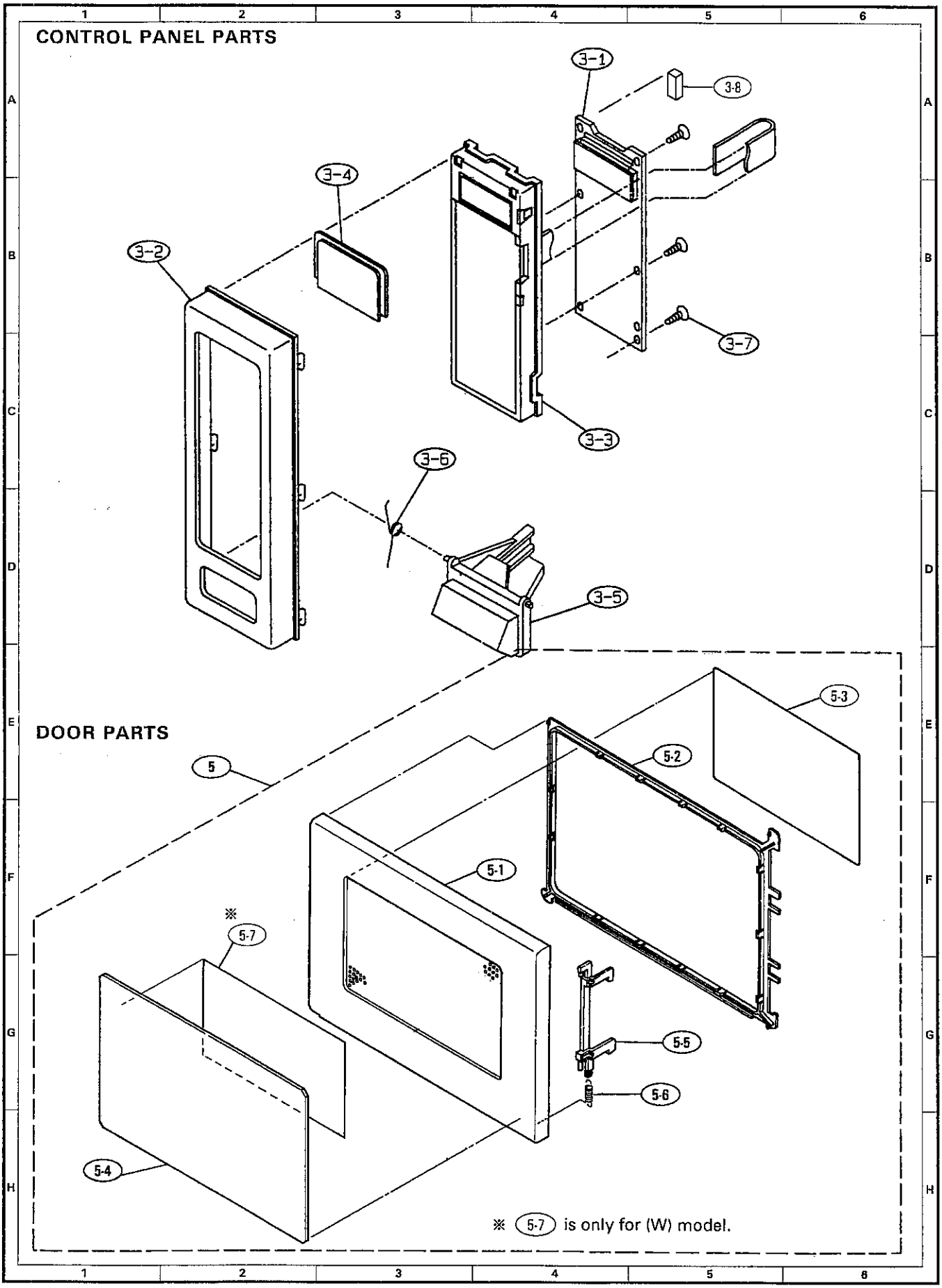
HOW TO ORDER REPLACEMENT PARTS

To have your order filled promptly and correctly, please furnish the following information.

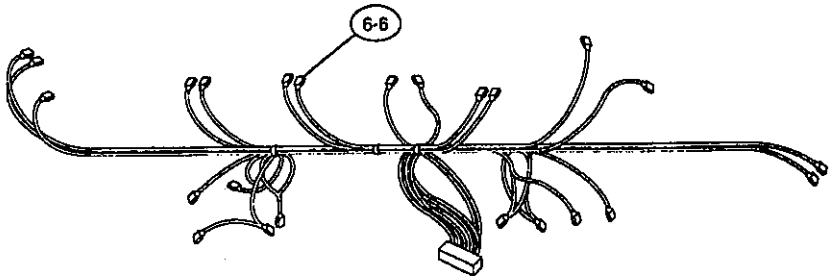
1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION

CABINET AND UNIT CHASSIS PARTS

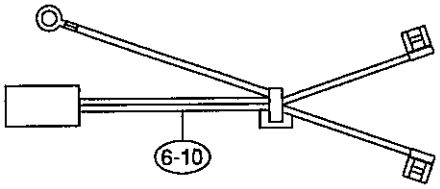


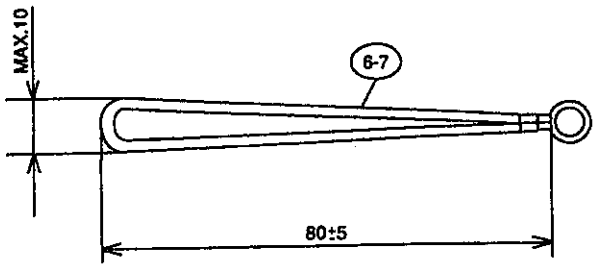

CONTROL PANEL PARTS
3-1
3-8
3-4
3-2
3-7
3-3
3-6
3-5
DOOR PARTS
5
5-3
5-2
5-1
※
5-7
5-5
5-6
5-4
※ 5-7 is only for (W) model.

MISCELLANEOUS

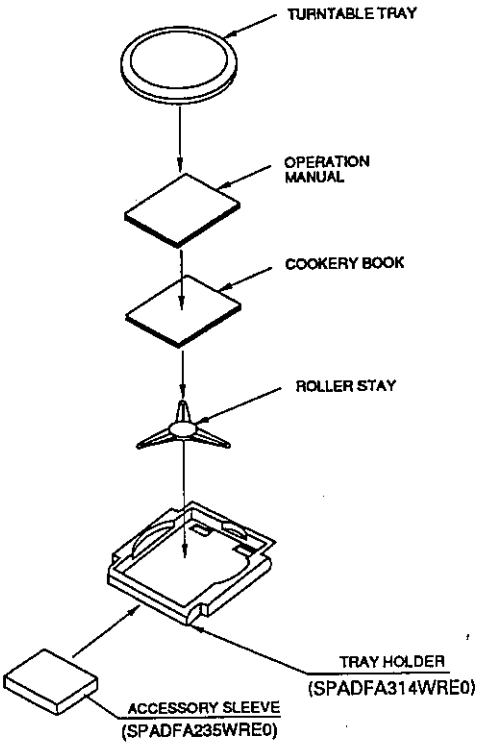


*Actual wire harness may be different than illustration.

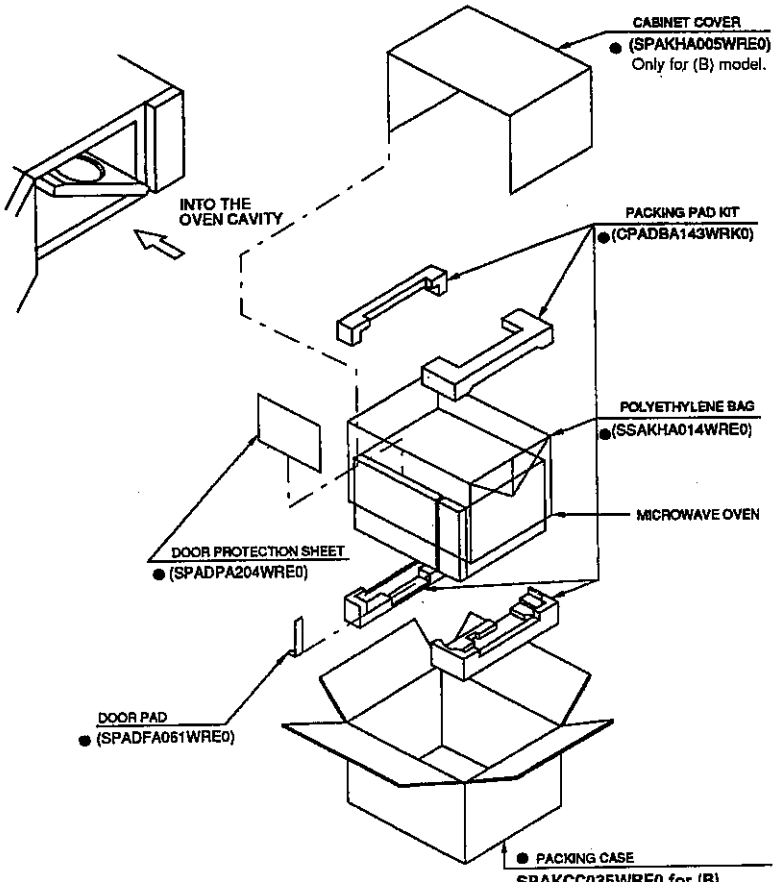




PACKING AND ACCESSORIES



ACCESSORIES ASSEMBLY



● Not Replaceable Items.

SHARP®

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